

We received from the Zoological Society along with the specimen of *Felis pardinoides* the skull belonging to it, which is described in the 'Proceedings' and 'Catalogue.' This skull has a sloping forehead and a well-developed face, quite different from the skull of *Pardalina Warwickii*, more like the skull of an ocelot, showing that it has no relation whatever to the genus *Pardalina*. It is true that it shows the animal is not aged; but the skull is perfectly developed, and is evidently that of a fully grown animal, and therefore does not justify Mr. Elliot's assertion that the "typical specimen is not an adult animal."

It is greatly to be regretted that Mr. Elliot did not take the trouble to compare the two skulls in the Museum before he made such a random assertion as that *F. pardinoides* is the same as *F. Geoffroyi*.

*Pardalina Warwickii* and the figure of *Felis guigna* have an immense number of small, rather unequal-sized, moderately closely placed solid black spots on the upper part of the body; those near the centre of the back are smaller, but not united into lines: and *P. Warwickii* has larger spots on the underside of the body, which are largest in the central line; these, according to the description and figures, are entirely wanting in *Felis guigna*. The tails are cylindrical and blunt at the end.

*Felis pardinoides*, on the contrary, has large-sized spots of a squarish form, with a pale centre, placed in about four series, more or less interrupted or irregular, on each side of the body; the vertebral line is marked with a narrow continuous line, which is forked, and more or less continued in front between the shoulders, and with a series of spots on each side of it, which are much smaller than those on the sides of the body; the tail is rather thick, the hinder half tapering to a point. The spot with the pale centre sometimes shows a likeness to the "rose" (that is to say, the spot formed of a ring of small spots with a pale centre) found in the American cats; hence the name of *pardinoides*. There is nothing of this kind to be seen in *P. Warwickii*, where the small spots are all equally separated.

X.—Notes on the Smaller Spotted Cats of Asia and its Islands. By Dr. J. E. GRAY, F.R.S. &c.

MR. BLYTH, in his paper on the Asiatic species of the genus *Felis* (P. Z. S. 1863, p. 184) regards *Felis nipalensis* and *F.*

*pardichrous* of Hodgson, *F. wagati* of Elliot, *F. nipalensis* of Vigors and Horsfield, *Leopardus Ellioti*, *L. chinensis*, *L. Reevesii*, and *Chaus servalinus* of Gray as all varieties of one species, which he calls *F. bengalensis*, Desmarest, and *F. minuta*, Temminck; and he considers *Felis Jerdoni* a distinct species. I may observe that *Leopardus Ellioti*, differing from the other species by its skull (which has a complete orbit), belongs to the genus *Viverriceps*, and is therefore out of the question.

Mr. Daniel Elliot is of opinion that *Felis Jerdoni*, Blyth, is only a variety of *Felis rubiginosa* (P. Z. S. 1871, p. 760). It has not the long head of a *Viverriceps*, to which *F. rubiginosa* belongs, and is much more likely to be a variety of *F. minuta*, which I considered it in the 'List of Mammalia,' 1842, p. 43. He also decides that *Felis pardinoides*, received from the Zoological Society as coming from India, is the young of *F. Geoffroyi* from the pampas of South America (P. Z. S. 1872, p. 203); but we have the skull of this cat (which Mr. Elliot could not have observed, though it is mentioned in the Catalogue), which shows that it entirely differs from the skull of *Pardalina Warwickii*, which he considers the same as *Felis Geoffroyi*, or from D'Orbigny's figure of the skull which appears to belong to the genus *Pardalina*.

I will not vouch for the distinctness of all the species I have entered in the 'Catalogue of Carnivora in the British Museum;' for the progress of science, aided by the collection of more specimens and the study of their changes, may prove some of them to be only varieties of others; but they appear, according to our present knowledge of the specimens and their distribution, to be worthy of being reckoned as distinct species.

The specimens in the Museum may be arranged thus:—

- I. *Tail cylindrical, shorter than the body, and marked with black spots. The body with subequal spots, sometimes united on the dorsal line.*
- a. *The body with a multitude of small spots*—those on the shoulders and outside of the limbs being the largest, those on the middle of the back between the haunches and, especially, between the shoulders being united into four or six narrow lines. China and Siberia.

*Felis chinensis*, Gray, Cat. Carniv. p. 27. no. 22.

*Hab.* China (*Reeves*). B.M.

*Felis euphilura*, D. Elliot, P. Z. S. 1871, p. 761, t. lxxvi.

*Felis undata*, Radde, Reisen im Süden von Ost-Sibirien, p. 106, t. iv.

*Hab.* Siberia? B.M.

This species is described from a skin in a very bad state in the British Museum, which Mr. Bartlett, from whom we received it, believed came from Siberia. Mr. Daniel Elliot (P. Z. S. 1871, p. 758), without giving any authority, calls it a species from "North-western Siberia." The markings of the skin are difficult to make out from its state; but I have no doubt Mr. Wolf studied it very particularly when he made the figure. The figure is very like that of *Felis chinensis*; but the spots on the back are not so numerous and small, and those on the underside are large and distinct. Otherwise I should have considered it a specimen of that species.

Mr. D. Elliot considers this skin of a cat the same as the one that Radde collected in Amurland, in *Eastern Siberia*, and figured and described in his 'Reisen im Süden von Ost-Sibirien' under the name of *Felis undata*, Desmarest, and *F. minuta*, Temminck, from Java; and he considers *F. chinensis*, from China, the same species. Radde's figure is very unsatisfactory. It would be desirable to receive specimens from the Amurland to see if the Chinese and Siberian specimens are the same, or how they differ, and if the same as the skin in the British Museum that Mr. D. Elliot has named and figured.

- b. *Body with five or six lines of oblong spots*—those on the middle of the back being very narrow and elongate, with two stripes on each side above the shoulder, those on the sides being larger and oblong, and on the outside of the limbs roundish. Malay archipelago.

† *Spots of body small and oblong. Fur short, rather harsh.*

*Felis javanensis*, Cat. Carniv. p. 26. no. 20.

*Hab.* Java (*Dr. Horsfield*). B.M.

*Felis Jerdoni*, Cat. Carniv. p. 28. no. 26.

*Hab.* Java? B.M.

*Felis Jerdoni* was named by Blyth in the 'Proc. Zool. Soc.' 1863, p. 185, from two specimens in the museum at Madras and an adult specimen in the British Museum. In the Catalogue I have adopted Blyth's name for this specimen, which was received from the India House, and probably came

from Sumatra, Dr. Horsfield calling it *Felis sumatrana*; and I placed with it another specimen received from Jeude's collection in Holland under the same name. The two specimens agree in having a short scarcely spotted tail, and may be a variety of that species. Mr. Elliot (P. Z. S. 1871, p. 760) observes that "Blyth's species [*F. Jerdoni*] is only a dark form of *F. rubiginosa*," and says that Mr. Blyth agrees with him!

How any zoologist could believe that the short-tailed short-headed *Felis Jerdoni*, with distinct spots, could be the same as the long-tailed, long-headed, and striped *Felis rubiginosa* is a mystery to me. I believe that their skulls would show that they belong to different genera. The long-headed *Felis rubiginosa* has a long, very peculiar skull, with complete orbits, and belongs to the genus *Viverriceps*, to which *Felis Jerdoni* shows no relation.

†† Spots of body elongate, larger. Fur soft.

*Felis minuta*, Cat. Carniv. p. 26. no. 19.

*Felis sumatrana*, Horsfield.

Hab. Sumatra. B.M.

*Felis Herscheli*, Cat. Carniv. p. 28. no. 27.

*Felis servalina*, Gray, P. Z. S. 1867, p. 401.

The spots as in *F. minuta*, but smaller and further apart, and the ones on the shoulder larger and confluent, and on the hinder part of the dorsal line in broader lines.

Hab. India? B.M.

The spots are somewhat like those of the next section; but the tail is short, like that of the Sumatran cat.

II. Tail cylindrical, blunt, as long as the body, with dark, more or less confluent spots. The body with irregular-shaped dark blotches. Continental India.

a. The blotches of the body oblong, solid, or very nearly so.

*Felis wagati*, Cat. Carniv. p. 29. no. 28.

Hab. India. B.M.

*Felis pardochroa*, Cat. Carniv. p. 28. no. 24.

Hab. Nepal. B.M.

*Felis tenasserimensis*, Cat. Carniv. p. 28. no. 25.

Hab. India, Tenasserim. B.M.

b. Spots on the body larger, squarish, and pale in the centre.

*Felis nepalensis*, Cat. Carniv. p. 27. no. 21.

Hab. India. B.M.

Perhaps a domesticated or semiwild hybrid between the Indian wild species and the common cat.

III. Tail tapering at the end, nearly as long as the body, with distinct black rings and a black tip.

*Felis pardinoides*, Cat. Carniv. p. 27. no. 23. B.M.

If this species was brought from India by Capt. Innes, as it was stated, and the habitat which we received with the specimen from the Zoological Society correct, it belongs to this section; but it has much more the appearance of a South-American cat; indeed it has a good deal of resemblance to *Felis mitis*. At any rate, it is distinct from any other Indian cat; and we must await the determination of its proper geographical distribution until we have received other specimens with their proper habitat. Mr. Elliot has stated that he believes it to be a specimen of *Felis Geoffroyi* from the Pampas. I have given my opinion on this crude and extraordinary idea in a previous paper in this number of the 'Annals' (p. 49), with a description of the peculiarities of this species.

XI.—On the Bladebones of *Balæna Hectori* and *Megaptera novæ-zelandiæ*. By Dr. J. E. GRAY, F.R.S. &c.

I HAVE received from Dr. Hector the drawings, one twelfth of the natural size, of the scapulæ of two whales, which he collected at Tory Channel, New Zealand.

The smaller one (see figure, p. 57) is about two feet high and an inch or two wider at the upper edge. The whalers said it was the scapula of a humpback; but this must be a mistake; for it certainly has nothing to do with the scapula of *Megaptera novæ-zelandiæ* (the New-Zealand humpback). The scapulæ of the humpback or fin-whales are always much broader than high; this is the scapula of a true *Balæna*, and has a distinct acromion process, which is bent towards the condyle, as in the scapula of *Macleayius australiensis* figured by me from a specimen in the British Museum sent by Dr. Haast from New Zealand (P. Z. S. 1873, p. 140). I should think it was probably a specimen of this species; but the upper margin is not quite so broad and expanded, and the figure appears to show